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EXAMINER

CHANKONG, DOHM

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/886,071	Applicant(s) TOPFL ET AL.	
	Examiner DOHM CHANKONG	Art Unit 2452	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 6, 11 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 11, and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2452

DETAILED ACTION

1. This action is in response to Applicant's request for continued examination, filed on 11/13/2008. Claims 1, 6, 11, and 16 are amended and are presented for further examination.
2. This action is a non-final rejection.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/13/2008 has been entered.

Response to Arguments

4. Applicant's arguments with respect to claims 1, 6, 11, and 16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2452

5. Claims 1, 6, 11, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims recite "a predetermined threshold value associated with business rules which factor a level of risk of retrieving data...and the associated hardware cost of cache memory." As written, the limitation suggests that the threshold is associated with two features: the level of risk and the associated hardware cost. However, according to Applicant's specification, the associated hardware cost is an example of the level of risk of retrieving data [pg. 7, 0020: "The level of risk may be attributed to, for example, the hardware cost of memory"]. Therefore, the claims should be rewritten to reflect the functionality found in the specification.

6. Claims 1, 6, 11, and 16 are also rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As discussed above, the claims have been amended to recite a predetermined threshold value associated which factors a level of risk of retrieving data that may not be used where the level of risk is attributed to "the hardware cost of cache memory." It is unclear how the level of risk is to be calculated from the hardware cost of cache memory (if the hardware cost is high, is the level of risk high?); the relationship between the level of risk (and the threshold) and the hardware cost of memory is not

Art Unit: 2452

explained in Applicant's specification. Nor does the specification explain what is meant by "hardware cost." One of ordinary skill in the art in reading the specification would not know how to implement the threshold value based on the hardware cost of memory. Thus, the claims are rejected for failing to comply with the enablement requirement.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 6, 11, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims lack proper antecedent basis: "the associated hardware cost of cache memory."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 6, 11, and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Horvitz, U.S. Patent No. 6,182,133, in view of Takagi et al, U.S. Patent No. 5,881,231 ["Takagi"], in further view of Barrett et al, U.S. Patent No. 5,727,129 ["Barrett"] in further view of Malkin et al, U.S. Patent No. 6,085,193 ["Malkin"].

Art Unit: 2452

9. Malkin was cited in the PTO-892 filed on 7/18/2006.

10. As to claim 1, Horvitz discloses a system for facilitating communication between a user and a network of information items, comprising:

a remote data storage device for storing the information items, wherein the information items are stored in the form of pages, and wherein the pages contain a plurality of links to other information items [column 47 «lines 9-34» where : Horvitz's web server corresponds to a remote data storage device];

a multi-layer architecture comprising:

a client device having a user interface program thereon, for allowing a user to interface with the network and request the information items [column 8 «lines 16-59»];

a server device, in communication with the client device and in communication with the remote storage device, for handling information requests from multiple clients and for storing information retrieved from the data storage devices locally in a server cache memory [column 26 «lines 30-44» where : Horvitz's proxy server corresponds to the claimed server device];

a data collection module for collecting and storing successive actions of a single particular authenticated user [Figure 6 | column 24 «line 43» to column 25 «line 30» | column 27 «lines 18-20» where : prefetching is based on user models that rely upon, in part, current and prior interaction of the user and recent sequences of pages downloaded to a user];

Art Unit: 2452

a probability module in communication with the data collection module for calculating a probability for the desirability of the links based on the action of the single particular user [Figure 6 | Figure 16 «items 1610, 1615» | column 27 «lines 18-20】 and for comparing the probability to a predetermined threshold value associated with a level of risk of retrieving data that may not be used to identify predicted links [column 4 «line 63» to column 5 «line 18» : see response to arguments above for analysis comparing Horvitz's rate of refinement to the claimed level of risk] and for retrieving the predicted information items associated with the links from the remote data storage devices [column 4 «lines 30-36»] and enabling the storage of the predicted information on both the client device layer and the server device layer of the multi-layer architecture in advance of the single particular user's request for the selected information items [column 4 «lines 20-47» | column 26 «lines 30-44»], the probability module further configured to:

update the probabilities assigned to the links with each successive user activity [column 4 «lines 4-12» | column 9 «lines 59-62» where : the user model reflects the probabilities of pages that may be prefetched];

abort retrieving the predicted information items [column 4 «lines 50-62» | column 5 «lines 11-18»];

continue retrieving the predicted information items from the remote data storage devices and storing the predicted information items in the server cache memory if the user requests the predicted information item [column 41 «lines 25-41»];

download the user requested information item to the client from the server cache memory [column 26 «lines 30-44»];

Art Unit: 2452

wherein the probability is calculated based solely on the actions of the single particular user and not as a member of a larger set of users [column 27 «lines 18-20» | column 41 «lines 44-67»].

Horvitz does not teach a single particular user that is authenticated or the feature of aborting retrieval of predicted items if the user requests an information item other than the predicted information items. In the same field of invention, Takagi is directed towards a system for prefetching information [abstract]. Takagi further discloses first authenticating a user before collecting user actions [column 9 «lines 61-64»]. It would have been obvious to one of ordinary skill in the art to modify Horvitz to include Takagi's user authentication feature. Takagi teaches that such a feature is beneficial to a prefetching system because it prevents user information from being leaked to other users [see Takagi, column 9 «lines 64-66»].

Further, Horvitz teaches aborting retrieval of predicted items but does not base the aborting feature on a user action. Barrett teaches a network data communication system wherein a probability module aborts the retrieval of predicted information items if the user requests an information item other than the predicted information items [abstract | Figure 7 <items 58, 64> | column 9 <lines 1-16>]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the functionality of module-initiated abortion of the retrieval of predicted information items in Horvitz's system. One would have been motivated to do this implementation to prevent unnecessary downloading of unwanted content in Horvitz's system based on a user action.

Finally, Horvitz does not teach a threshold value that is associated with a hardware cost of cache memory. Malkin teaches determining a threshold value based on the cost of cache

Art Unit: 2452

availability [column 19 «line 61» to column 20 «line 5»: prefetching based on cache size and access cost to adding additional cache memory to the system where the cache size reads on the hardware cost]. It would have been obvious to one of ordinary skill in the art to have modified Horvitz's prefetch system to include Malkin's teachings. Such a modification is an example of using a known technique [Malkin's cache cost to determine prefetching] to improve similar devices (methods, or products) [Horvitz's prefetch system] in the same way [adding the cache cost factor in Horvitz's calculus for prefetching links].

11. As to claims 6, 11, and 16, as they do not teach or further define over the previously claimed limitations, they are similarly rejected for at least the same reasons set forth for claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOHM CHANKONG whose telephone number is (571)272-3942. The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571.272.3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2452

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dohm Chankong/
Examiner, Art Unit 2452